CLAIMS

The invention claimed is:

1. A method in a computer system for preventing atypical clinical events related to information identified by DNA testing a person, comprising the steps of:

receiving clinical agent information, the clinical agent information including an identifier of the agent;

determining if a gene is associated with the clinical agent information, and if so, obtaining a genetic test result value for the associated gene of the person;

comparing the genetic test result value to a list of polymorphism values associated with an atypical clinical event, and

determining whether the genetic test result value correlates to a polymorphism value on the list, and if so, outputting information about the atypical clinical event associated with the polymorphism value.

2. The method of claim 1, wherein the clinical agent information includes a dosage of the identified clinical agent.

3. The method of claim 1, wherein the clinical agent information is received over a communication network from a remote computer.

4. The method of claim 1, wherein the step of determining if a gene is associated with the clinical agent information includes querying a first data structure containing agent-gene associations and determining if a gene has one or more variants associated with an atypical response to the identified clinical agent.

5. The method of claim 4, wherein a plurality of genes have one or more variants associated with an atypical response to the identified clinical agent.

6. The method of claim 4, further comprising the step of initiating a clinical action if a gene has at least one variant associated with an atypical response to the identified clinical agent.

7. The method of claim 6, wherein the clinical action is providing a warning that the identified agent should not be administered.

8. The method of claim 6, wherein the clinical action is ordering a genetic test for the person.

9. The method of claim 6, wherein the clinical action is canceling another clinical action.

10. The method of claim 1, wherein the genetic test result value is obtained from an electronic medical record of the person stored within a comprehensive healthcare system.

11. The method of claim 1, wherein the step of comparing includes querying a second data structure containing polymorphism-atypical result associations.

12. The method of claim 1, wherein the second data structure includes information about risks associated with the atypical clinical event.

13. The method of claim 12, wherein the step of outputting information includes accessing the risk information in the second data structure.

14. The method of claim 1, wherein the step of determining if a gene is associated with the clinical agent information includes querying a first data structure containing agent-gene associations and wherein the step of comparing includes querying a second data structure containing polymorphism-atypical result associations, wherein the first data structure and second data structure are integrated as a single data structure.

15. The method of claim 1, wherein the output information includes a message containing a warning of the patient specific risk.

16. The method of claim 1, wherein the clinical agent information includes a dosage of the identified clinical agent, and wherein the second data structure includes information about risks associated with various dosages of the identified clinical agent.

17. The method of claim 1, further comprising the step of outputting information that the person is not at risk if the genetic test result value does not correlate to a polymorphism value.

18. A computer system for preventing atypical clinical events related to information identified by DNA testing a person, comprising:

a receiving component that receives clinical agent information, the clinical agent information including an identifier of the agent;

a first determining component that determines if a gene is associated with the clinical agent information;

an obtaining component for obtaining a genetic test result value for the associated gene of the person;

a comparing component for comparing the genetic test result value to a list of polymorphism values associated with an atypical clinical event;

a second determining component that determines whether the genetic test result value correlates to a polymorphism value on the list, and

an outputting component that outputs information about the atypical clinical event associated with the polymorphism value.

19. The computer system of claim 18, wherein the clinical agent information includes a dosage of the identified clinical agent.

20. The computer system of claim 18, wherein the clinical agent information is received over a communication network from a remote computer.

21. The computer system of claim 18, wherein the first determining component includes a querying component that queries a first data structure containing agent-gene associations, and wherein the system further comprises a third determining component that determines if a gene has one or more variants associated with an atypical response to the identified clinical agent.

22. The computer system of claim 21, wherein a plurality of genes have one or more variants associated with an atypical response to the identified clinical agent.

23. The computer system of claim 21, further comprising an initiating component that initiates a clinical action if a gene has at least one variant associated with an atypical response to the identified clinical agent.

24. The computer system of claim 23, wherein the clinical action is providing a warning that the identified agent should not be administered.

25. The computer system of claim 23, wherein the clinical action is ordering a genetic test for the person.

26. The computer system of claim 23, wherein the clinical action is canceling another clinical action.

27. The computer system of claim 18, wherein the genetic test result value is obtained from an electronic medical record of the person stored within a comprehensive healthcare system.

28. The computer system of claim 18, wherein the comparing component includes a querying component that queries a second data structure containing polymorphism-atypical result associations.

29. The computer system of claim 18, wherein the second data structure includes information about risks associated with the atypical clinical event.

30. The computer system of claim 29, wherein the outputting component includes an accessing component that accesses the risk information in the second data structure.

31. The computer system of claim 18, wherein the first determining component includes a querying component that queries a first data structure containing agent-gene associations and wherein the comparing component includes a second querying component that queries the second data structure containing polymorphism-atypical result associations, wherein the first data structure and second data structure are integrated as a single data structure.

32. The computer system of claim 18, wherein the output information includes a message containing a warning of the patient specific risk.

33. The computer system of claim 18, wherein the clinical agent information includes a dosage of the identified clinical agent, and wherein the second data structure includes information about risks associated with various dosages of the identified clinical agent.

34. The computer system of claim 18, further comprising a second outputting component that outputs information that the person is not at risk if the genetic test result value does not correlate to a polymorphism value.

35. A computer-readable medium containing instructions for controlling a computer system for preventing atypical clinical events related to information identified by DNA testing a person, by:

receiving clinical agent information, the clinical agent information including an identifier of the agent;

determining if a gene is associated with the clinical agent information, and if so, obtaining a genetic test result value for the associated gene of the person;

comparing the genetic test result value to a list of polymorphism values associated with an atypical clinical event, and

determining whether the genetic test result value correlates to a polymorphism value on the list, and if so, outputting information about the atypical clinical event associated with the polymorphism value.

36. The computer-readable medium of claim 35, wherein the clinical agent information includes a dosage of the identified clinical agent.

37. The computer-readable medium of claim 35, wherein the clinical agent information is received over a communication network from a remote computer.

38. The computer-readable medium of claim 35, wherein the step of determining if a gene is associated with the clinical agent information includes querying a first data structure containing agent-gene associations and determining if a gene has one or more variants associated with an atypical response to the identified clinical agent.

39. The computer-readable medium of claim 38, wherein a plurality of genes have one or more variants associated with an atypical response to the identified clinical agent.

40. The computer-readable medium of claim 38, further comprising the step of initiating a clinical action if a gene has at least one variant associated with an atypical response to the identified clinical agent information.

41. The computer-readable medium of claim 40, wherein the clinical action is providing a warning that the identified agent should not be administered.

42. The computer-readable medium of claim 40, wherein the clinical action is ordering a genetic test for the person.

43. The computer-readable medium of claim 40, wherein the clinical action is canceling another clinical action.

44. The computer-readable medium of claim 35, wherein the genetic test result value is obtained from an electronic medical record of the person stored within a comprehensive healthcare system.

45. The computer-readable medium of claim 35, wherein the step of comparing includes querying a second data structure containing polymorphism-atypical result associations.

46. The computer-readable medium of claim 35, wherein the second data structure includes information about risks associated with the atypical clinical event.

47. The computer-readable medium of claim 46, wherein the step of outputting information includes accessing the risk information in the second data structure.

48. The computer-readable medium of claim 35, wherein the step of determining if a gene is associated with the clinical agent information includes querying a first data structure containing agent-gene associations and wherein the step of comparing includes querying a second data structure containing polymorphism-atypical result associations, wherein the first data structure and second data structure are integrated as a single data structure.

49. The computer-readable medium of claim 35, wherein the output information includes a message containing a warning of the patient specific risk.

50. The computer-readable medium of claim 35, wherein the clinical agent information includes a dosage of the identified clinical agent, and wherein the second data structure includes information about risks associated with various dosages of the identified clinical agent.

51. The computer-readable medium of claim 35, further comprising the step of outputting information that the person is not at risk if the genetic test result value does not correlate to a polymorphism value.